


অসম ৰাজপত্ৰ
সত্যমেব জয়তে
THE ASSAM GAZETTE
অসাধাৰণ
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GOVERNMENT OF ASSAM
ORDERS BY THE GOVERNOR
ASSAM ELECTRICITY REGULATORY COMMISSION

NOTIFICATION

Dated the 20th September, 2017

SMART GRID REGULATIONS, 2017

No. AERC/461/2014/52.-In exercise of the powers conferred by clause (zp) of sub-section (2) of section 181 of the Electricity Act, 2003 (36 of 2003), the Assam Electricity Regulatory Commission (AERC) hereby makes the following regulations namely the Assam Electricity Regulatory Commission (Smart Grid) Regulations, 2017.

REGULATIONS

CHAPTER I: PRELIMINARY

1. Short Title and Commencement

- 1.1. These Regulations may be called the “Assam Electricity Regulatory Commission (Smart Grid) Regulations, 2017”.
- 1.2. These Regulations shall extend to the whole of State of Assam.
- 1.3. These Regulations shall come into force from the date of their publication in the Assam Gazette.

2. Definitions

- 2.1. Unless the context otherwise requires, for the purpose of these Regulations –
 - (a) ‘Act’ means the Electricity Act, 2003 and amendments thereof;

- (b) '**Advanced Metering Infrastructure (AMI)**' including smart meters means the infrastructure required to enable the Distribution Licensee to accurately collect, monitor and analyse real-time consumption data from consumers, communicate price signals to consumers and where permitted control load;
- (c) '**Aggregator**' is an entity registered with the Distribution Licensee to provide aggregation of one or more of the services like demand response services under the demand response mechanism, Distributed Generation, Energy Storage etc. within a control area;
- (d) '**Bureau of Indian Standards (BIS)**' is a statutory body under the administrative control of Ministry of Consumer Affairs, Food and Public Distribution, Govt. of India responsible for standardization, product and system certification, hallmarking etc. BIS is also responsible for standardization and certification at the international level;
- (e) '**Central Electricity Authority (CEA)**' is a statutory organization originally constituted under section 3(1) of the repealed Electricity (Supply) Act, 1948 since substituted by section 70 of the Electricity Act, 2003;
- (f) '**Commission**' means the Assam Electricity Regulatory Commission;
- (g) '**Consumer Grievance Redressal Forum & Electricity Ombudsman**' means such forum or office of Ombudsman established in the exercise of powers conferred on the Commission by Section 181 read with sub-section (5), (6) and (7) of Section 42 of the Electricity Act, aims to protect the interests of electricity consumers and to give them an additional Forum to bring their complaints and grievances before the Forum and Ombudsman for quick Redressal;
- (h) '**Cyber Security**' means security standards which enable organizations to practice safe security techniques to minimize the cyber security attacks;
- (i) '**Demand Side Management (DSM) Regulations**' means such regulations notified in exercise of the powers conferred by sub-section (1) of Section 181 and clause (zp) of sub-section (2) of Section 181 of the Electricity Act, 2003, and all other powers enabling it in this behalf provides methods and principles for assessing cost effectiveness of DSM programmes and charges recoverable by the distribution licensee in connection therewith and for matters incidental and ancillary thereto;
- (j) '**Distributed Generation (DG)**' means power generation at the point of consumption;
- (k) '**Distribution Licensee**' means a licensee authorised to operate and maintain a distribution system for supplying electricity to the consumers in his area of supply;
- (l) '**DPR**' means detailed project report that contains necessary technical and commercial information on the SG project in accordance with these regulations;

(m) ‘**Indian Electricity Grid Code (IEGC)**’ is a regulation made by the Central Commission in exercise of powers under clause (h) of subsection (1) of Section 79 read with clause (g) of sub-section (2) of Section 178 of the Act. The IEGC also lays down the rules, guidelines and standards to be followed by various persons and participants in the system to plan, develop, maintain and operate the power system, in the most secure, reliable, economic and efficient manner, while facilitating healthy competition in the generation and supply of electricity;

(n) ‘**Interoperability**’ means the measure of ease of integration between two systems or software components to achieve a functional goal;

(o) ‘**Key Performance Indicator (KPI)**’ is a type of performance measurement to evaluate its success, or to evaluate the success of a particular activity in which it is engaged;

(p) ‘**Licensed Business**’ means the functions and activities, which the licensee is required to undertake in terms of the licence granted by the Commission or being a deemed licensee under the Act;

(q) ‘**Licensee**’ means a person who has been granted a license under section 14 and shall include a deemed licensee;

(r) “**Microgrid**” is an intelligent electricity distribution system that interconnects loads, distributed energy resources and storage within clearly defined electrical boundaries to act as a single controllable entity with respect to the main grid. A microgrid uses information, communications and control technologies to operate the system’s distributed supply and demand resources in a controlled and coordinated way either while connected to the main grid or while islanded. A microgrid can connect and disconnect from the grid to enable it to operate in both grid-connected or island-mode;

(s) ‘**Prosumer**’ means any consumer generating electricity for his own use and/or for selling;

(t) ‘**Smart Grid**’ means an electricity networks that can integrate the actions of all users connected to it using advanced metering, communication and information technology to deliver electricity efficiently, sustainably, reliably and securely;

(u) ‘**Smart Grid Vision and Roadmap**’ for India is a document notified by Ministry of Power (MoP) in August 2013, as amended from time to time;

(v) ‘**Standards of Performance (SOP) Regulations**’ provide guidelines to maintain distribution system parameters within the permissible limits. These standards serve as guidelines for licensees for providing an efficient, reliable, coordinated and economical system of electricity distribution;

(w) ‘**State Grid Code**’ lays down the rules, guidelines and standards to be followed by various agencies and participants in the intra-State transmission system to plan, develop, maintain and operate the intra-State transmission

system in the most efficient, reliable and economic manner, while facilitating a healthy competition in the generation and supply of electricity;

(x) ‘**Transmission Licensee**’ means a licensee authorised to establish or operate transmission lines;

(y) ‘**Wide Area Measurement Systems (WAMS)**’ is advanced measurement technology, information tools, and operational infrastructure that facilitate the understanding and management of the increasingly complex behaviour exhibited by large power systems;

2.2. The words and expressions used and not defined in these Regulations but defined in the Act shall have the meaning assigned to them in the Act.

3. Applicability of Regulations

3.1. These Regulations shall be applicable to the Generating Companies and Licensees which are engaged in the business of generation, transmission, distribution, supply of electricity and to all categories of consumers in the state of Assam.

3.2. The Generating Companies and Licensees shall ensure that aggregator and/or other third parties involved comply with these Regulations through appropriate conditions in the respective contracts.

3.3. These Regulations shall be applied in conjunction with existing Regulations, including AERC (Terms and Conditions for Determination of Tariff) Regulations, 2006, AERC (Distribution Licensees' Standards of Performance) Regulations, 2004, AERC (Transmission Licensees' Standards of Performance) Regulations, 2004, AERC (Assam Electricity Grid Code) Regulations, 2004, AERC (Electricity Supply Code and Related Matters) Regulations 2004, (First Amendment) 2007, and AERC (Co-generation and Generation of Electricity from Renewable Sources of Energy) Regulations 2015 and AERC (Grid Interactive Solar PV Systems) Regulations, 2015 and as amended from time to time shall be used in conjunction and consistency with all relevant existing standards and standards under development by CEA, BIS and other designated authorities such as: Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations 2010, Central Electricity Regulatory (Grid Standards) Regulations 2010, Central Electricity Regulatory (Measures relating to Safety and Electric Supply) Regulations 2010, Central Electricity Regulatory (Installation and Operations of Meters) Regulations 2006, Central Electricity Regulatory (Technical Standards for Connectivity to the Grid) Regulations 2007, respective State Grid Code, other standards for equipment, smart metering and AMI, cyber security and interoperability etc.

CHAPTER II: OBJECTIVE AND SCOPE

4. Objective

4.1. The objective of these Regulations is to bring about economy, efficiency improvement in generation and licensee operations, manage the transmission and

distribution networks effectively, enhance network security, integrate renewable and clean energy into the grid at both large and distributed generation levels, enhance network visibility, promote optimal asset utilization, enhance access, improve customer service levels and allow for participation of prosumers in operations of Licensees through greater technology adoption across the value chain in the electricity sector and particularly in the transmission and distribution segments.

4.2. Government of India has notified a Smart Grid Vision and Roadmap that clearly articulates the goals and timelines for deployment with respect to the above objectives. These Regulations take into consonance the aforementioned roadmap(s), and aim to propagate the expansion of Smart Grid and allied technologies in accordance with the roadmap(s).

5. Scope of the Regulations

5.1. These Regulations deal with :-

- Approval of Smart Grid investments consistent with the objectives;
- Tariff design for enabling consumers, prosumers and utilities to derive the benefits of the Smart grid investments;
- Incentive/dis-incentive design for consumers, prosumers and utilities to ensure maximization of the efficiency gain from the Smart grid investments;
- Protection of consumer privacy and maintaining integrity of data;
- Adoption by all entities within the ambit of these Regulations the relevant equipment, network and interoperability standards and codes;
- Security of network operations, particularly with respect of cyber security;
- Enabling effective integration of Renewable Energy/Distributed Generation.

5.2. All entities covered under these Regulations are required to demonstrate adherence to the requirements stipulated herein through appropriate reporting structures. To the extent possible, these reporting arrangements shall be through automated means with minimum human intervention.

CHAPTER III: INVESTMENTS IN SMART GRID PROJECTS

6. Review and Approval of Smart Grid Investments

6.1. The Licensees shall submit an integrated Multi-Year Smart Grid Plan for their respective Licence area along-with Multi-Year Tariff Petition or ARR Petition, for the approval of Commission.

6.2. All Smart Grid projects requiring investments of more than Rupees 10 Crores be submitted to the Commission for prior approval of investments:
Provided that investments of less than Rupees 10 Crores shall not require prior approval of the Commission if it is part of Multi-Year Smart Grid Plan of the utility approved by the Commission:

6.3. The proposal for Smart Grid Projects shall include:

- Detailed Project Report

- b) Customer engagement and participation plan as applicable
- c) Training and capacity building plan and
- d) any other information that may be stipulated by the Commission from time to time:

Provided that the detailed project report would include inter alia description of the project, objective and rationale for the project, technical feasibility study, projected financial implications, target stakeholders, detailed cost benefit analysis detailing all costs qualitative and quantitative in nature, assessment of the project, in line with the cost effectiveness guidelines issued by the Commission, proposed mechanism for recovery of costs, delivery strategy, implementation mechanism, implementation schedule, performance incentives if any, monitoring and evaluation plan, plan for increasing awareness among the stakeholders.

- 6.4. In the process of approving the investments, the Commission shall consider the objectives set out in the Smart Grid roadmaps and in these Regulations and how the proposed investments meet the objectives;
- 6.5. While approving the proposed investments the Commission shall consider the benefits that accrue to the Licensees and to the consumers/prosumers. Each Smart Grid investment proposal submitted to the Commission shall include a clear and quantified account of such costs and benefits to the various stakeholders;
- 6.6. Ordinarily the approval process shall adopt the existing AERC Tariff Regulations for reviewing and approving the proposals received from Licensees, except for specific requirements under these Regulations or other related Regulations of the Commission. Such related Regulations shall inter-alia include the AERC (Demand Side Management) Regulations, 2012;
- 6.7. The Commission may adopt alternate method of evaluating the cost benefit analysis of integrated Smart Grid Multi-Year Plan instead of evaluating Smart Grid Projects/ Programs on an individual basis.
- 6.8. The Commission may provide the incentive / dis-incentive mechanism for the transmission licensee, distribution licensee linked to the execution, implementation and performance during the life of the project. The Commission may also specify financial incentives/dis-incentives to participating consumers to encourage active and effective participation in the Smart Grid programs.
- 6.9. Where deemed necessary, the Commission may approve creation of backbone communication networks, Wide Area Measurement Systems (WAMS), Advanced Metering Infrastructure (AMI) or any other such facility in anticipation of future Smart Grid implementation requirements, in the interest of creating a seamless implementation of various Smart Grid applications. The Licensee is required to submit a preliminary proposal that indicates a cost-benefit analysis in this regard, followed by DPR, to be prepared upon obtaining in-principle approval of the Commission;
- 6.10. The Smart Grid design shall incorporate sufficient visualization and analytics capabilities to analyse the impact and make effective use of the investments made;
- 6.11. The DPRs shall also reflect sufficient outlays for training of implementers, users

and other relevant stakeholders. The Commission may reject or require revisions to project plans that do not sufficiently reflect the training needs and the training plans/proposals.

- 6.12. The project plans that involve engagement with customers shall also incorporate strategy to solicit customer interest and create adequate awareness among the target customer population. The Commission may reject or require revisions to project plans that do not sufficiently reflect these details in adequate manner.
- 6.13. The Commission may modify the proposal as deemed fit in order to ensure its consistency with overall objectives.
- 6.14. A list of indicative components of Smart Grid Projects is appended as Schedule-I

7. Recovery of Costs

- 7.1. Transmission licensee, distribution licensee shall identify the net incremental costs, if any, associated with planning, design and implementation of programmes.
- 7.2. Transmission licensee, distribution licensee may propose methodology for recovery of net incremental costs through tariff or any other mechanism.
- 7.3. In order to qualify for cost recovery, each program must be
 - a) Approved prior to implementation and
 - b) Implemented in accordance with the approved program plan
- 7.4. The recovery of the costs of the Smart Grid projects or programs may be through one or more of the following:
 - (a) The Annual Revenue Requirement (ARR) determination process, which may include a component of costs to be recovered through the regular ARR and tariff process during the year;
 - (b) Through specific tariff schemes and designs as described below, that would be incident on the participating consumers;
 - (c) Through design of surcharges to be recovered through specified consumer categories.
 - (d) Through identifying and pricing new services including reliability guarantees/slabs;
- 7.5. The Commission may take assistance and advice of such experts as it deems necessary for examining the proposal submitted by the transmission licensee, distribution licensee.
- 7.6. The Commission shall, through Orders, specify the cost recovery methodology to be adopted.

CHAPTER IV: TARIFF DESIGN

8. Design of Tariff Structures for Smart Grid Programs

- 8.1.** The Commission, at the request of a Licensee implementing a Smart Grid projects or on its own initiative may implement specific tariff regimes for Smart Grid projects.
- 8.2.** The tariff designs implemented may include the following:
 - a)** Time-Of-Use (TOU) Tariff: TOU rate where each customer pays a higher amount of tariff (on-peak prices) for the peak hours during the day and lower (off-peak) tariff during the night, so that they are incentivized to shift their load during low wholesale cost.
 - b)** Critical Peak Pricing (CPP): High costs of supply are usually observed for a small number of days during a year, directly connected with extreme low or high temperatures. CPP charges customers significantly high prices under predetermined trigger conditions for these days. This type of rate is thus an additive one and can be combined with any other (usually TOU) tariff.
 - c)** Real-Time Pricing (RTP) Tariffs: RTP tariff, according to which load consumption is charged on an hourly or half-hourly or fifteen minute basis and mirror wholesale prices/cost trends to the customers. In the day-ahead RTP tariff, customers are informed 24 hours in advance about the estimated prices so they are able to plan their next day electricity usage or, sometimes hedge these prices with other financial instruments, where permitted.
 - d)** In addition to the above, variants and combinations of the above along with the regular consumer tariffs may be considered by the Commission considering the purpose, the historical data available, the benefits envisaged, technology considerations and consumer protection needs.
- 8.3.** The Commission shall allow creation of provision for R&D activities in the field of Smart Grid projects in the Aggregate Revenue Requirement of the Distribution Licensee and which may be equivalent to 1 paise per unit of sales of the Distribution Licensee. The Distribution Licensee shall be required to maintain a separate account for this fund and utilization of this fund shall require prior approval of the Commission.
- 8.4.** The Commission shall also allow creation of provision for R&D activities in the field of Smart Grid projects in the Aggregate Revenue Requirement of the Transmission Licensee and Load Dispatch Centre, which may be equivalent to 0.10 percent of the Aggregate Revenue Requirement of the respective year of Transmission Licensee and Load Dispatch Centre. The Transmission Licensee and Load Dispatch Centre shall be required to maintain a separate account for this fund and utilization of this fund shall require prior approval of the Commission.
- 8.5.** The Commission shall also notify suitable Distributed Generation (DG) Tariffs for prosumers selling electricity from the DG facilities to the grid.

- 8.6. In course of designing optimal power tariff schemes for Licensees, the Commission shall adequately take into account the need for such tariffs to be simple, understandable, financially rewarding for consumer, and for ensuring that the impact and benefits for the Licensees and consumers/prosumers are apparent.
- 8.7. The tariff design may reflect suitable incentives as well as dis-incentives/penalties for consumers participating in the tariff programs based on the level of adherence to the program requirements. This will be particularly relevant for Demand Response (DR) and other programs that require active consumer or prosumer participation.
- 8.8. To evolve the most efficient tariff design and to promote efficiency in consumption the Commission may require specific load research programs to be incorporated in the Smart Grid projects or programs.

CHAPTER V: SAFETY AND STANDARDS RELATED TO SMART GRID

9. System Standards

The transmission licensee, distribution licensee shall normally adopt the system standards as per Regulations notified by the CEA. Where CEA or BIS standards are not yet in place, relevant IEC/IEEE/ANSI Standards should be followed in that order. In such case where no standards or regulations are notified by the CEA the appropriate standards, regulations notified by the appropriate Commission shall be applicable.

10. Network and Communication Standards

In respect of network, communication, products, interoperability and cyber security, the standards as provided by BIS or such appropriate authority shall be adopted. Where these standards are not yet in place, relevant IEC/IEEE/ANSI Standards shall be followed in that order.

11. Product Standards

Where available BIS standards shall be complied with for all equipment and technology related to Smart Grid. Where BIS standards are not yet in place, relevant IEC/IEEE/ANSI Standards should be followed in that order.

12. Performance Standards

- 12.1. In accordance with the requirements of the Act, the Commission has implemented AERC (Distribution Licensees' Standards of Performance) Regulations, 2004 and AERC (Transmission Licensees' Standards of Performance) Regulations, 2004 as amended from time to time. To the extent applicable, the SOP Regulations shall apply for assessing the performance of the Smart Grid projects and for incentivizing/penalizing performance of Licensees;
- 12.2. The Commission may specify and require implementation of additional Standards of Performance to maximize the benefits and ensure compliance of the Smart Grid investments proposed;

- 12.3.** All Standards of Performance to be met in the Smart Grid project implementation area shall be measurable through the measurement, visualization and analytics facilities that are required to be integral part of the Smart Grid project design;
- 12.4.** The Commission, through Order, may require specific reporting arrangements to be implemented and periodic reports to be furnished to the Commission on actual performance against the required standards.

13. Customer Data Protection Standards

- 13.1.** Licensees and other implementers of the Smart Grid projects/programs shall ensure that protection of consumer privacy is accorded the highest levels of priority in the design of the Smart Grid projects and the corresponding investment plans.
- 13.2.** Consumer data shall be protected through appropriate levels of encryption and access controls, and shall ordinarily not be shared with external agencies without explicit authorization of the Commission or unless required by statutory authorities or by courts of law. If deemed necessary for effective implementation, the Commission shall allow Licensees to disclose consumption data to third parties. The following conditions shall apply in such circumstances:
 - a)** Data shall be classified as:
 - (i) Personally Identifiable Information (PII), which consists of customer names, addresses, identification numbers, and other information that specifically identifies the person or entity to which it applies.
 - (ii) Customer-Specific Energy Usage Data (CEUD), which in most cases, does not identify an individual customer but includes detailed information about the utility service provided to the customer.
 - b)** Data access by parties providing services shall only be permitted with explicit authorization of designated senior officers of the licensee who are duly authorized by the Board of Directors of the licensee to provide such data under required confidentiality, non-disclosure and non-unrelated use agreements. Such third parties shall be permitted access to all aggregated consumption data as well as CEUD data. No PII data shall be disclosed to third parties.
 - c)** The Commission, upon request of the licensee, may also approve third party service providers to have direct access to consumers and their consumption data as part of a Smart Grid project or program approved by the Commission. The licensee shall permit such access through appropriate confidentiality arrangements with such third parties.
 - d)** It is explicitly clarified that neither the concerned licensee nor the third parties permitted data access would be permitted to sell or disseminate the consumer data to any other party or use for any other purpose other than the purpose specified for the Smart Grid project or program.

- e) Consumers shall have access to all of their own consumption data, which may be appropriately displayed on the meter display of the consumer and/or on authorized websites, with suitable levels of access control and security.

13.3. Disputes on consumer privacy and data protection shall be resolved through the Consumer Grievance Redressal Forum & Electricity Ombudsman.

13.4. The Commission may at its discretion specify rules for customer privacy and data protection that the licensee shall be obliged to follow.

14. Testing and Certification

The Commission may require the licensee to provide certificate of compliance to specific standards from the designated nodal authority at the national level for the Smart Grid equipment installed.

CHAPTER VI: CUSTOMER ENGAGEMENT AND SMART GRID

15. Awareness and Capacity Building

15.1. In the development phase of Smart Grid programs, there would be significant needs for customer/prosumer education and outreach. Licensees shall earmark 1% of the project cost for each Smart Grid project towards consumer awareness and capacity building.

15.2. As part of the detailed project reports, Licensees shall define a clear internal and external communication strategy that identifies the critical communication needs and linking the same to the key project components. The Commission may reject project proposals or may require revisions to the communication strategy if required.

16. Customer Participation and Incentives

16.1. The Commission shall review and approve proposals for financial incentives/dis-incentives to participating consumers to encourage active and effective participation in the Smart Grid programs.

16.2. For each such incentive/dis-incentive program the Licensee shall demonstrate cost benefits firstly to the consumer in general and then the Distribution business. The project details including the projected incentive to be paid to the consumer and the calculation of the incentive mechanism shall be included within the DPR. The program design may include involvement of third parties or aggregators. In such cases, the program design shall also include incentive/disincentive structuring involving such third parties or aggregators as well.

16.3. Full details of the program shall be available on the Licensee's website and details of rebates, incentives and penalties listed as items on the participating consumer's electricity bill. More sophisticated programmes such as those related to dynamic tariff and demand response shall require consumers to have access to their data

through consumer web-based portal or in-home display or other similar means accessible to the consumers.

16.4. The Commission may review the incentive/dis-incentive programs based on consumer/prosumer and utility feedback and the overall response observed on the Smart Grid program.

17. Consumer or Prosumer Dispute Redressal Process

17.1. Disputes arising between Licensees and customers in relation to the Smart Grid program shall be resolved through the Consumer Grievance Redressal Forum & office of the Electricity Ombudsman, as relevant.

17.2. The Commission, from time to time, may review and modify the relevant Regulations on Consumer Grievance Redressal to ensure effective implementation of the Smart Grid program.

CHAPTER VII: SMART GRID CELL AND NODAL OFFICER

18. Constitution of a Smart Grid Cell and Appointment of Nodal Officer

18.1. The Commission through orders may require Licensees to constitute a Smart Grid Cell within the organization responsible for coordinating activities related to defining and implementing the Smart Grid roadmap and pilots where they have been approved.

18.2. Upon its constitution, Licensee shall appoint a nodal officer responsible for heading the operations of such cell.

18.3. The Smart Grid Cell shall undertake the following functions:

- (a) Be responsible for development of the overall Smart Grid program of the Licensee and the identification of specific plans;
- (b) Develop, or require to be developed, detailed project reports in consonance with the requirements of the Smart Grid programs and roadmaps and in accordance with these Regulations and other Relevant regulations and codes;
- (c) Monitor the program or project and file returns on the monthly progress of the project to the Commission and file Project Completion Report. The Project Completion Report shall comprehensively record the results and experiences of the implementation of Smart Grid programs or projects of the Licensee;
- (d) Report to the Commission on the standards of performance achieved against the notified benchmarks;
- (e) The Smart Grid Cell shall prepare a detailed operation procedure of Smart Grid project and submit to the Commission for approval.
- (f) All other functions assigned by the Licensee's management and by the Commission from time to time.

- 18.4. The Licensee may combine activities related to energy efficiency, demand side management and Smart Grid implementation within the same cell.
- 18.5. The absence of a Smart Grid Cell shall not limit the implementation of the Smart Grid projects by the Licensee.

CHAPTER VIII: ASSESSMENT OF PERFORMANCE OF SMART GRID PROJECTS AND PROGRAMS

19. Evaluation, Measurement & Verification (EM&V)

- 19.1. The Smart Grid programme, project shall be monitored and evaluated based on appropriate methodology including Key Performance Indicators as decided by the Commission using suitable measurement and verification protocols identified for each of the individual programmes, projects by the Commission.
- 19.2. Transmission licensee, distribution licensee shall also submit an evaluation report to the Commission, which inter alia will include outcomes, benefits, lessons learnt and way forward.
- 19.3. The Commission, through Order, may specify evaluation, measurement and verification principle to be adopted by the Generating Companies and Licensees in their Smart Grid project plans and monitoring mechanisms.

20. Performance Measurement through KPI

For each Smart Grid project, the Licensee shall define Key Performance Indicators (KPIs) and their measurement criteria and the process for monitoring and reporting. For each KPI there shall also be a methodology for measuring and verifying the performance approved by all stakeholders.

21. Project Monitoring and Progress Reporting

- 21.1. The monitoring process shall include methods for identifying and resolving project issues and disputes.
- 21.2. Project progress reports shall be submitted to the Commission as per periods specified through orders.
- 21.3. After the completion of each project, a completion report shall be submitted to the Commission within 3 months of project completion. If a project involves multiple phases of roll-out, a completion report shall be submitted for each phase being completed.

CHAPTER IX: MISCELLANEOUS PROVISIONS

22. Effect of Non-compliance

Failure to comply with any requirement of these Regulations shall not invalidate any Proceeding merely by reason of such failure unless the Commission is of the view that

such failure has resulted in miscarriage of justice.

23. Issue of Orders and Practice Directions

- 23.1.** Subject to the provision of the Act and these Regulations, the Commission may, from time to time, issue Orders and Practice directions with regard to the implementation of these Regulations and procedure to be followed on various matters, which the Commission has been empowered by these Regulations to direct, and matters incidental or ancillary thereto.
- 23.2.** Notwithstanding anything contained in these Regulations, the Commission shall have the authority, either suomoto or on a petition filed by any interested or affected party, to determine the tariff of any applicant.

24. Power to Remove Difficulties

If any difficulty arises in giving effect to any of the provisions of these Regulations, the Commission may, by a general or special order, not being inconsistent with the provisions of these Regulations or the Act, do or undertake to do things or direct the Generating Company or Transmission Licensee or Distribution Licensee to do or undertake such things which appear to be necessary or expedient for the purpose of removing the difficulties.

25. Power of Relaxation

The Commission, for reasons to be recorded in writing, may relax any of the provisions of these Regulations on its own motion or on an application made before it by an interested person.

26. Interpretation

If a question arises relating to the interpretation of any provision of these Regulations or its relationship and interplay with any other regulation of the Commission, the decision of the Commission shall be final.

27. Power to Amend

The Commission may, at any time add, vary, alter, modify or amend any provisions of these regulations. If any difficulty arises in giving effect to the provisions of these Regulations, the Commission may, by general or specific order, make such provisions not inconsistent with the provisions of the Act, as may appear to be necessary for removing the difficulty.

28. Repeal and Savings

- 28.1.** Nothing in this Regulation shall be deemed to limit or otherwise affect the inherent power of the Commission to make such orders as may be necessary for ends of justice to meet or to prevent abuses of the process of the Commission.
- 28.2.** Nothing in this Regulation shall bar the Commission from adopting in conformity with the provisions of the Act a procedure, which is at variance with any of the provisions of this Regulation, if the Commission, in view of the special circumstances of a matter or class of matters and for reasons to be recorded in

writing, deems it necessary or expedient for dealing with such a matter or class of matters.

28.3. Nothing in this Regulation shall, expressly or impliedly, bar the Commission dealing with any matter or exercising any power under the Act for which no Regulations have been framed, and the Commission may deal with such matters, powers and functions in a manner it thinks fit.

(By order of the Commission)

Secretary
Assam Electricity Regulatory Commission.

Schedule – I**A list of indicative components of Smart Grid Projects**

1. Automated Metering Infrastructure (AMI)
2. Demand Response
3. Micro-Grids
4. Distribution SCADA/Distribution Management
5. Distributed Generation
6. Peak Load Management
7. Outage Management
8. Asset Management
9. Wide Area Measurement Systems
10. Energy Storage Projects
11. Grid Integration of Renewable
12. Electric Vehicle including Grid to Vehicle (G2V) and Vehicle to Grid (V2G)
Interactions.
13. Smart Grid Data collection and analysis
14. Tariff Mechanism including interruptible and dynamic tariffs, time of use, critical peak pricing, real time pricing etc.

(By order of the Commission)

S. K. ROY,
Secretary,
Assam Electricity Regulatory Commission.